

REMARKS/ARGUMENTS

In this Amendment, Applicant amends claims 1-10 and 12-16 to improve clarity. No new matter is introduced.

No amendments are made in response to the rejections of the Office Action.

Prior to entry of this Amendment, claims 1-16 were pending in the application. After entry of this Amendment, claims 1-16 remain pending in the application.

Drawings

In the Amendment filed on August 3, 2006, Applicant pointed out that the status of the drawings was not reflected on the PTOL-326 form in the first Office Action mailed on May 3, 2006, and requested that “the Examiner’s next communication include an indication as to the acceptability of the filed drawings or as to any perceived deficiencies so that the Applicants may have a full and fair opportunity to submit appropriate amendments and/or corrections to the drawings.” Amendment, p. 7/ll. 9-13.

Applicant notes that the PTOL-326 form in the second Office Action mailed October 20, 2006, failed to correct this deficiency. Once again, Applicant requests that the Examiner indicate the status of the drawings in the next paper mailed by the U.S. Patent and Trademark Office (USPTO).

Translation

In another issue discussed in the Amendment filed on August 3, 2006, Applicant requested “an English-language translation of Inoue be made available to the Applicants and that the next office action be made non-final” in light of MPEP § 706.02 II. Amendment, p. 8/ll. 9-10 and footnote 1.

Applicant notes that although the second Office Action mailed October 20, 2006, is non-final, it failed to include an English-language translation of Japanese Patent Publication No. 11-176855 A to Inoue (“Inoue”), despite the Examiner’s continued reliance on Inoue and the requirements of MPEP § 706.02 II. Applicant submits that the Office Action’s statement “[t]he reference does not explicitly disclose that the chip is arranged at an angle less than 90 degrees with respect to the gate” is evidence that the Examiner is relying on “additional facts that may be contained in the underlying full text document,” triggering the translation requirement.

In order to advance prosecution of this application, Applicant submits a copy of a machine-generated translation from the Patent Abstracts of Japan (“PAJ”) website.

Office Action

On its face, the Office Action purports to reject claims 1-16 under 35 U.S.C. § 103(a). However, Applicant notes that the Examiner failed to present any argument as to the rejection of claim 8, 9, or 11. Nor does claim 8, 9, or 11 appear to be unpatentable over any proper combination of the cited references. Applicant requests that the Examiner either establish a proper prima facie case regarding claims 8, 9, and 11 in the next paper mailed by the USPTO or indicate that they are allowable.

Within the Office Action, the Examiner rejected claims 1-5, 7, and 10 under 35 U.S.C. § 103(a) as being unpatentable over Inoue in view of Japanese Patent Publication No. 10-138294 A to Abe (“Abe”); rejected claims 12 and 13 under 35 U.S.C. § 103(a) as being unpatentable over Inoue in view of Abe, and further in view of U.S. Patent No. 5,750,153 to Shibata (“Shibata”); rejected claim 6 under 35 U.S.C. § 103(a) as being unpatentable over Inoue in view of Abe, and further in view of U.S. Patent No. 6,717,248 B2 to Shin et al. (“Shin”); and

rejected claims 14-16 under 35 U.S.C. § 103(a) as being unpatentable over Inoue in view of Abe, and further in view of Shibata.

To establish a prima facie case of obviousness under 35 U.S.C. § 103(a) using multiple references, there must be some suggestion or motivation, either in the references themselves or in the knowledge available to one of ordinary skill in the art, to combine the references in a manner resulting in the claimed invention. Applicant submits that no such suggestion or motivation exists to combine Inoue and Abe in a manner resulting in the invention of claims 1-16.

For example, Inoue discusses problems in prior art devices, similar to Abe, in which resin is injected through a narrow resin inlet (at gate 8a) at one corner of lead frame 1 and vented through a vent 10a at an opposite corner of lead frame 1. Translation of Inoue, p. 2/[0003] and [0005], and FIGs. 4 and 5. Inoue attempts to solve those problems using, inter alia, a large resin inlet in one of four corners of mould cavity 9 and vent blocks 10-1, 10-2, and 10-3 in the three remaining corners. Id., p. 2/[0006] and [0008], and FIGs. 1a, 2a, and 3a. Additionally, unlike Abe, vent blocks 10-1, 10-2, and 10-3 of Inoue rotate during the process to control the flow of resin. Id., p. 2/[0006] and [0008]. Thus, Applicant submits that Inoue effectively teaches away from Abe and, as a result, there is no suggestion or motivation combine Inoue and Abe in a manner resulting in the invention of claims 1-16.

Applicant also notes that Abe discusses adjusting the angle of a resin injection port 18 to match the diagonal line 15 of a non-square cavity 12 so as to prevent, inter alia, twisting of a semiconductor chip A while filling the cavity 12 with resin. However, in Inoue, the disclosed mould cavity of the prior art (FIG. 4) is substantially square, as is the disclosed mould cavity 9 of Inoue itself (FIGs. 1a, 2a, and 3a). And the angle of resin injection already appears to substantially match the diagonal of the square mould cavities of both the prior art and Inoue.

Thus, Applicant submits that one of ordinary skill in the art would not perceive Abe as substantively adding to the disclosure of Inoue and, as a result, that there is no suggestion or motivation to combine Inoue and Abe in a manner resulting in the invention of claims 1-16.

Additionally, Applicant notes that, due to geometric considerations, the resin flow of Inoue should be substantially symmetrical about the diagonal of the square mould cavity 9. In contrast, adjusting the angle of the resin injection port 18 to match the diagonal line 15 of non-square cavity 12 in Abe intentionally disrupts the symmetry of resin flow, as can be seen by comparing prior art FIG. 6 (where the resin flow is initially symmetrical about the 45° line 30) to the invention FIG. 3 (where the resin flow is not symmetrical). Thus, Applicant again submits that one of ordinary skill in the art would not perceive Abe as substantively adding to the disclosure of Inoue and, as a result, that there is no suggestion or motivation to combine Inoue and Abe in a manner resulting in the invention of claims 1-16.

Finally, Applicant submits that Shibata, Shin, and the other art of record do not appear to overcome the deficiencies discussed above with respect to Abe and Inoue.

For at least the reasons discussed above, Applicant submits that independent claims 1 and 10 are patentable under 35 U.S.C. § 103(a) over any proper combination of Abe, Inoue, Shibata, Shin, and the other art of record. Applicant further submits that dependent claims 2-9 and 11-16 are patentable under 35 U.S.C. § 103(a) over any proper combination of Abe, Inoue, Shibata, Shin, and the other art of record, at least for the same reason that claims 1 and 10 are patentable.

Request for Reconsideration and Allowance

Accordingly, in view of the above amendments and remarks, reconsideration of the rejections and allowance of each of claims 1-16 in connection with the present application is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

If necessary, the Director of the USPTO is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; in particular, extension of time fees.

Respectfully submitted,

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